

Mr. Bradley Eisenhart
Jay County Landfill
5825 W. South
Portland, Indiana 47371

Re: Minor Source Modification No:
075-12861-00029

Dear Mr. Eisenhart:

Jay County Landfill applied for a Part 70 operating permit on October 10, 2000 for a municipal solid waste landfill. An application to modify the source was received on October 17, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for increased use at the source:

One (1) utility flare (constructed in 1999), identified as FL1, with a maximum flow rate of 1500 cubic feet per minute of landfill gas.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAM has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Ms. Kate Huckelbridge, ERG, P.O. Box 2010, Morrisville, North Carolina 27560, or call (919) 468-7902 to speak directly to Ms. Huckelbridge. Questions may also be directed to Duane Van Laningham at IDEM, OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

ERG/KH

cc: File - Jay County
U.S. EPA, Region V
Jay Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR MANAGEMENT

**Jay County Landfill
5825 W. South
Portland, Indiana 47371**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 075-12861-00029	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: Expiration Date:

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Certification

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1 (22)]

The Permittee owns and operates a municipal solid waste landfill.

Responsible Official: Bradley Eisenhart
Source Address: 5825 W. South, Portland, Indiana 47371
Mailing Address: P.O. Box 1264, Portland, Indiana 47371
SIC Code: 4953
County Location: Jay
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source, under PSD or Emission Offset Rules;

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to modify the operation of the following emission units and pollution control devices by increasing the usage to its maximum capacity:

- (a) One (1) utility flare (constructed in 1999), identified as FL1, with a maximum flow rate of 1500 cubic feet per minute (cfm) of landfill gas.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because it is subject to 40 CFR 60, Subpart WWW which requires all affected sources to obtain a Part 70 permit.

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAM, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to

the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute, rule or in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAM of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAM not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.8 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this approval until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.9 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

**C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline.
- (c) IDEM, OAM reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM on or before the date it is due.
- (d) Unless otherwise specified in this permit, any annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) utility flare (constructed in 1999), identified as FL1, with a maximum flow rate of 1500 cubic feet per minute of landfill gas.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-8][40 CFR 60.752, Subpart WWW]

Pursuant to 326 IAC 8-8 (Municipal Solid Waste Landfills) and 40 CFR 60, Subpart WWW (New Source Performance Standards), once the non-methane organic compound (NMOC) emissions from this source are equal to or greater than 50 Megagrams (Mg) per year, the VOC emissions from the source shall be limited by the utility flare, FL1, having a destruction efficiency of at least ninety-eight percent (98%). Currently, this source has NMOC emissions below 50 Mg/yr.

D.1.2 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.

D.1.3 Municipal Solid Waste Landfill NSPS [326 IAC 12][40 CFR Part 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall either comply with 40 CFR 60.752 (b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40 CFR 60.754.

Once the NMOC emission rate is greater than or equal to 50 Mg/yr, the source must collect landfill gas and rout it to the utility flare. The flare shall be designed and operated in accordance with 40 CFR 60.18.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.4 Non Methane Organic Compound (NMOC) Rate Calculation [40 CFR 60.754]

Pursuant to 40 CFR 60.754 the Permittee shall:

- (a) Calculate the non methane organic compound (NMOC) rate using either of the equations listed below. The values to be used in both equations are 0.05 per year for k , 170 cubic meters per megagrams for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} .

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i}) (C_{NMOC})(3.6 \times 10^{-9})$$

Where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

K = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagrams solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t^i = age of the i^{th} section, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 3.6×10^{-9} = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M, if the documentation provisions of 40 CFR 60.758 are followed.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$M_{\text{NMOC}} = 2 L_o R (e^{-kc} - e^{-kt})(C_{\text{NMOC}})(3.6 \times 10^{-9})$$

Where,

M_{NMOC} - mass emission rate of NMOC, megagrams per year

L_o = methane generation potential, cubic meters per megagrams solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of landfill, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

c = time since closure, years. For active landfill c = 0 and $e^{-kc} = 1$

3.6×10^{-9} = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of M, if the documentation provisions of 40 CFR 60.758(d)(2) are followed.

If the calculated non methane organic compound (NMOC) emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with the provisions of 40 CFR 60.752(b)(2) or determine a site-specific non methane organic compound (NMOC) emission rate using the procedures described in 40 CFR 60.754(a)(3).

- (b) Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in 40 CFR 60.754(a)(1) is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.753(b)(1). If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752 (b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste.

The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of appendix A of 40 CFR 60 or Method 18 of appendix A of 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall

divide the NMOC concentration from Method 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

The Permittee shall recalculate the NMOC mass emission rate using the equations provided in 40 CFR 60.754(a)(1)(i) and (a)(1)(ii) and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in 40 CFR 60.754(a)(1).

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in 40 CFR 60.754(a)(4).

If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every five (5) years using the methods in 40 CFR 60.754(a)(3).

Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall estimate the NMOC mass emission rate using equations in 40 CFR 60.754(a)(1)(i) or (a)(1)(ii) and using a site-specific methane generation rate constant k , and the site-specific NMOC concentration as determined in 40 CFR 60.754(a)(3) instead of the default values provided in 40 CFR 60.754(a)(1). The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the Permittee shall comply with 40 CFR 60.752(b)(2).

If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using the equations in 40 CFR 60.754(a)(1) and using the site-specific methane generation rate constant and NMOC concentration obtained in 40 CFR 60.754(a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

The Permittee may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in 40 CFR 60.754(a)(3) and (a)(4) if the method has been approved by the Administrator.

- (c) The Permittee subject to 40 CFR 60.754 shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions of 40 CFR 60.752(b)(2) is already installed, the Permittee shall estimate the NMOC emission rate using the procedures provided in 40 CFR 60.754(b).

D.1.5 Reporting Requirements [40 CFR 60.757]

- (a) Submit a non methane organic compound (NMOC) emission rate report to the Office of Air Management and IDEM Indiana Northwest Office initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) or (b)(3). The Office of Air Management (OAM) and IDEM Indiana Northwest Office may request such additional information as may be necessary to verify the reported NMOC emission rate. The report

should contain an annual or 5-year estimate of the non methane organic compound (NMOC) emission rate using the formula and procedures provided in 40 CFR 60.754(a) or (b), as applicable. The initial NMOC emission rate report shall be submitted within 90 days of the data waste acceptance commences and may be combined with the initial design capacity report required in 40 CFR 60.757(a). Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided in 40 CFR 60.757(b)(1)(ii) and (b)(3). If the estimated NMOC emission rate as reported in the annual report to the Office of Air Management (OAM) and IDEM Indiana Northwest Office is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five (5) year period in lieu of the annual report. The estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which as NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Office of Air Management (OAM) and IDEM Indiana Northwest Office. This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the Office of Management and IDEM Indiana Northwest Office. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5) year emission rate. The Permittee is exempted from the requirements of 40 CFR 60.757(b)(1) and (2) after the installation of a collection and control system in compliance with 40 CFR 60.752(b)(2), during such time as the system is in operation and in compliance with 40 CFR 60.753 and 60.755.

- (b) Submit a collection and control system design plan to the Office of Management (OAM) and IDEM Indiana Northwest Office within one (1) year of the first non methane organic compound (NMOC) emission rate report, required under 40 CFR 60.757(b), in which NMOC emission rate exceeds 50 megagrams (Mg) per year; except if the Permittee elects to recalculate the NMOC emission rate after Tier 2 sampling and analysis as provided in 40 CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year of the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of 40 CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Office of Air Management (OAM) and IDEM Indiana Northwest Office within one (1) year of the first calculated emission rate exceeding 50 megagrams per year.
- (c) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.6 Record Keeping Requirements [326 IAC 12][40 CFR 60.758]Pursuant to 40 CFR 60.758
Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to 40 CFR 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place,

and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within (4) hours. Either paper copy or electronic formats are acceptable.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Jay County Landfill
Source Address: 5825 W. South, Portland, Indiana 47371
Mailing Address: P.O. Box 1264, Portland, Indiana 47371
Source Modification No.: 075-12836-00029

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**Indiana Department of Environmental Management
Office of Air Management**

**Technical Support Document (TSD) for a Part 70
Minor Source Modification**

Source Background and Description

Source Name:	Jay County Landfill
Source Location:	5825 W. South, Portland, Indiana 47371
County:	Jay
SIC Code:	4953
Operation Permit No.:	075-12836-00029
Operation Permit Issuance Date:	Pending
Minor Source Modification No.:	075-12861-00029
Permit Reviewer:	ERG/KH

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Jay County Landfill relating to the modification of the following emission units and pollution control devices by increasing the usage to its maximum capacity: a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute (cfm) of landfill gas.

History

On October 17, 2000, Jay County Landfill submitted an application to the OAM requesting to permit their utility flare to its maximum design capacity of 1500 cubic feet/minute (cfm) of landfill gas. Previously, this flare had been operating considerably below its design capacity. After discussions with IDEM, it was determined that due to low emission rates, the flare was not required to be permitted. However, the landfill gas system at the landfill was expanded, increasing the amount of gas sent to the flare. This request to permit the flare at Jay County Landfill will be treated as a minor source modification to their pending Title V permit. On October 10, Jay County Landfill submitted a Title V permit application to IDEM, that is currently pending.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
FL1	Landfill Gas Combustion	26	1.0	1500	>1400

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 17, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations pages 1-5.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the increase in PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

	Potential To Emit (tons/year)*
PM	0
PM-10	0
SO ₂	6.42
VOC	0.97
CO	72.49
NO _x	13.32

HAP's	Potential To Emit (tons/year)*
Single HAP	$7.3 + 10^{-2}$
TOTAL	0.21

* The potential to emit reflects emissions after the flare, operating at maximum capacity, since this source modification is specifically for the flare.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5 (d)(4) because the CO emissions are between 25 tpy and 100 tpy.

The Title V permit has not been issued yet, therefore, this minor source modification serves as a permit to modify operation by increasing the usage of the utility flare to its maximum capacity.

County Attainment Status

The source is located in Jay County.

Pollutant	Status
PM-10	Unclassifiable
SO ₂	Attainment
NO ₂	Unclassifiable
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Jay County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Jay County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 250
PM-10	less than 250
SO ₂	less than 250
VOC	less than 250
CO	less than 250
NO _x	less than 250

- (a) This existing source is a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based on the fact that this source is a young landfill with NMOC emissions less than 50 Mg/yr uncontrolled. As a result, it can be deduced that emissions of all regulated pollutants are beneath the PSD major source threshold. Since VOC and CO would be the pollutants with the highest emissions (VOC before control and CO after control.)

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Flare (FL1)	0	0	6.42	0.97	72.49	13.32	0.21
PSD Level	—	—	40	40	100	40	—

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) This source is subject to the New Source Performance Standard, 326 IAC 12 (40 CFR 60, Subpart WWW). This rule requires the non methane organic compound (NMOC) emission rate to be calculated annually and a collection and control system design plan be submitted one year after NMOC emissions reach 50 megagrams (Mg) per year. This rule also contains collection and control requirements that a source must comply with once the source emits non-methane organic compounds (NMOC) at a rate greater than 50 megagrams (Mg) per year. Currently, this source has NMOC emissions less than 50 Mg/yr. However, when the NMOC emissions increase to 50 Mg/yr or greater, the source will be required to route all collected gas to an open flare collection system that is designed and operated in accordance with 40 CFR 60.18. The landfill will have applicable compliance monitoring conditions with regard to the open flares once the NMOC emissions from the landfill reach 50 Mg/yr.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

This unit is not subject to 326 IAC 6-3-2 because a flare is a control device and is not considered a process operation.

326 IAC 9 Carbon Monoxide Emission Rules

The utility flare is not used for refuse incineration, therefore, 326 IAC 9-1-2(3) (Carbon Monoxide Emission Limits for Refuse Incineration and Burning Equipment) does not apply. All other remaining provisions of Rule 9 are not specific to this source.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion

The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 075-12836-00029.

Appendix A: Emissions Calculations

Company Name: Jay County Landfill
Address City IN Zip: 5825 W. South, Portland, IN 47371
CP: 12861
Pit ID: 29
Reviewer: Kate Huckelbridge
Date: 11/14/2000

Uncontrolled Potential Emissions (tons/year)

Pollutant	Landfill Gas Emissions	Methane Gas Combustion	Total
PM	0	0	0
PM-10	0	0	0
SO2	6.42	0	6.42
NOx	0	0	0
VOC	48.27	0	48.27
CO	0	0	0
single HAP (toluene)	3.64	0	3.64
total HAP	10.66	0	10.66

Controlled Potential Emissions (tons/year)

Pollutant	Landfill Gas Emissions	Methane Gas Combustion	Total
PM	0	0	0
PM-10	0	0	0
SO2	6.42	0	6.42
NOx	0	13.32	13.32
VOC	0.97	0	0.97
CO	0	72.49	72.49
single HAP (toluene)	7.27E-02	0	0.0727
total HAP	0.21	0	0.21

Note: Methane Gas combustion occurs only when Landfill Gas is controlled (flared).

Company Name: Jay County Landfill
Address City IN Zip: 5825 W. South, Portland, IN 47371
CP: 12861
Pit ID: 29
Reviewer: Kate Huckelbridge
Date: 11/14/2000

Flare design capacity: 1500 cfm
 Higher heating value of LFG: 497 BTU/ft³
 Fuel Equivalent: 3.92E+05 MMBTU/yr

Landfill Gas Emissions:

Methane makes up 50% of LFG

$$\begin{aligned}
 Q(\text{CH}_4) \text{ (cfm)} &= \text{Maximum LFG throughput (cfm)} * 50\% \\
 &= 1500 * 0.5 && \text{cfm} \\
 &= 750 && \text{cfm} \\
 &= 1.12\text{E}+07 && \text{m}^3/\text{yr}
 \end{aligned}$$

SO₂:

MW = 64 g/mol
 Concentration = 100 ppmv

$$\begin{aligned}
 Q(\text{SO}_2)(\text{m}^3/\text{yr}) &= 2 * Q(\text{CH}_4)(\text{m}^3/\text{yr}) * C(\text{SO}_2)(\text{ppmv}) / 1 * 10^6 \\
 &= 2 * 1.12\text{E}+07 * 100 / 1000000 \\
 &= 2.23\text{E}+03
 \end{aligned}$$

$$\begin{aligned}
 \text{Potential to Emit of SO}_2 \text{ (tpy)} &= Q(\text{SO}_2)(\text{m}^3/\text{yr}) * \text{MW (g/mol)} * 1000 / 24.5(\text{L/mol}) / 9.072\text{E}+005 \text{ (g/ton)} \\
 &= 2.23\text{E}+003 * 64 * 1000 / 24.5 / 9.072\text{E}+005 \\
 &= 6.42
 \end{aligned}$$

NMOC :

MW = 86.18 g/mol (from AP-42)
 Concentration = 558 ppmv

$$\begin{aligned}
 Q(\text{NMOC})(\text{m}^3/\text{yr}) &= 2 * Q(\text{CH}_4)(\text{m}^3/\text{yr}) * C(\text{NMOC})(\text{ppmv}) / 1 * 10^6 \\
 &= 2 * 1.12\text{E}+07 * 558 / 1000000 \\
 &= 1.24\text{E}+04
 \end{aligned}$$

$$\begin{aligned}
 \text{Uncontrolled NMOC Emissions (tpy)} &= Q(\text{NMOC})(\text{m}^3/\text{yr}) * \text{MW (g/mol)} * 1000 / 24.5(\text{L/mol}) / 9.07\text{E}+5 \text{ (g/ton)} \\
 &= 2.23\text{E}+003 * 86.18 * 1000 / 24.5 / 9.072\text{E}+005 \\
 &= 48.27
 \end{aligned}$$

Methane Combustion Emissions:

flare destruction efficiency = 98%

NMOC:

$$\begin{aligned}\text{Potential to Emit NMOC (tpy)} &= \text{Uncontrolled Emissions of NMOC (tpy)} * (1 - \text{destruction efficiency of flare}) \\ &= 48.27 * (1 - 0.98) \\ &= 0.97\end{aligned}$$

CO:

$$\begin{aligned}\text{Potential to Emit CO (tpy)} &= \text{Fuel Equivalent (MMBTU/yr)} * \text{Emission factor}^{**} (\text{lb/MMBTU}) / 2000 \text{ lb/ton} \\ &= 392000 * 0.37 / 2000 \\ &= 72.49\end{aligned}$$

** The emission factor is from AP-42, chapter 13.5 for industrial flares, p. 13.5-4.

NOx:

$$\begin{aligned}\text{Potential to Emit NOx (tpy)} &= \text{Fuel Equivalent (MMBTU/yr)} * \text{Emission factor}^{**} (\text{lb/MMBTU}) / 2000 \text{ lb/ton} \\ &= 392000 * 0.068 / 2000 \\ &= 13.32\end{aligned}$$

** The emission factor is from AP-42, chapter 13.5 for industrial flares, p. 13.5-4.

Appendix A: Emissions Calculations

Page 4 of 4 TSD App A

Company Name: Jay County Landfill
Address City IN Zip: 5825 W. South, Portland, IN 47371
CP: 12861
Pit ID: 29
Reviewer: Kate Huckelbridge
Date: 11/14/2000

Maximum Design Flow Rate = 1500 cfm
Maximum Design Flow Rate = 2.23E+07 m3/yr

LFG Compound	Molecular Weight	Default Concentration (ppmv)	Uncontrolled Emission (tpy)	Controlled Emission (tpy)
1,1,1-Trichloroethane	133.41	0.48	6.43E-02	1.29E-03
1,1,2,2-Tetrachloroethane	167.85	1.11	1.87E-01	3.74E-03
1,1-Dichloroethane	98.97	2.35	2.34E-01	4.67E-03
1,1-Dichloroethene	96.94	0.2	1.95E-02	3.89E-04
1,2-Dichloroethane	98.96	0.41	4.08E-02	8.15E-04
1,2-Dichloropropane	112.99	0.18	2.04E-02	4.09E-04
Acrylonitrile	53.06	6.33	3.37E-01	6.75E-03
Benzene	78.11	1.91	1.50E-01	3.00E-03
Carbon disulfide	76.13	0.58	4.44E-02	8.87E-04
Carbon tetrachloride	153.84	0.004	6.18E-04	1.24E-05
Carbonyl sulfide	60.07	0.49	2.96E-02	5.91E-04
Chlorobenzene	112.56	0.25	2.83E-02	5.65E-04
Chloroethane	64.52	1.25	8.10E-02	1.62E-03
Chloroform	119.39	0.03	3.60E-03	7.20E-05
Dichloromethane	84.94	14.3	1.22E+00	2.44E-02
Ethylbenzene	106.16	4.61	4.92E-01	9.83E-03
Hexane	86.18	6.57	5.69E-01	1.14E-02
Mercury	200.61	2.92E-04	5.88E-05	1.18E-06
Methyl chloride (chloromethane)	50.49	1.21	6.14E-02	1.23E-03
Methyl ethyl ketone	72.11	7.09	5.14E-01	1.03E-02
Methyl isobutyl ketone	100.16	1.87	1.88E-01	3.76E-03
Perchloroethylene	165.83	3.73	6.21E-01	1.24E-02
Toluene	92.13	39.3	3.64E+00	7.27E-02
Trichloroethylene	131.4	2.82	3.72E-01	7.44E-03
Vinyl chloride	62.5	7.34	4.61E-01	9.22E-03
Xylenes	106.16	12.1	1.29E+00	2.58E-02
TOTAL			10.66	0.21

Source: AP-42, chapter 2.4 for Solid Waste Disposal, p. 2.4-10-12.

METHODOLOGY:

Uncontrolled Potential to Emit (tpy) = Design Flow Rate (m3/yr)*Concentration of Pollutant (ppmv)*MW (g/mol)*1000 (L/m3)/(24.5(L/mol)*9.072E+005 (g/ton)*1000000)

Controlled Potential to Emit (tpy) = Uncontrolled Potential to Emit (tpy) * (1- flare destruction efficiency)